A case of posterior reversible encephalopathy syndrome associated with eclampsia after a first hypertensive episode

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Background

Posterior reversible encephalopathy syndrome (PRES) is a neurologic disorder characterised by reversible vasogenic oedema and can commonly present in pregnancy with preeclampsia or eclampsia. It can manifest as seizures, headaches, visual disturbances and altered mental status. It is a clinico-radiographic diagnosis, and a CT brain is useful to exclude other causes of the symptoms, such as an intracranial haemorrhage, and an MRI can be used to evaluate for vasogenic oedema.

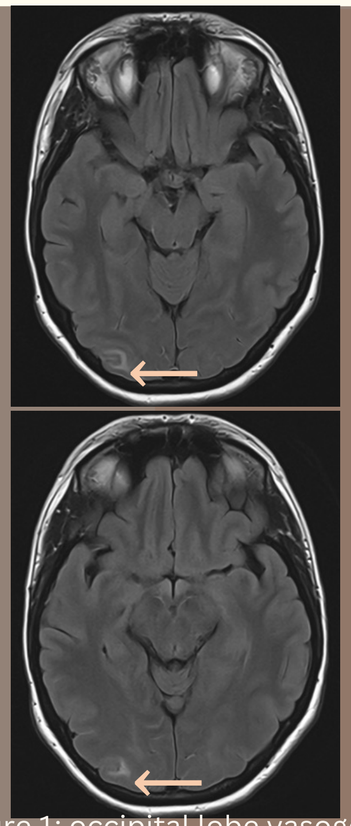

Figure 1: occipital lobe vasogenic oedema (⟶) on MRI images

Case report

A 42 year old multiparous patient at 33 weeks gestation presented by ambulance after an eclamptic seizure preceded by visual loss and slurred speech. Her BP on ambulance arrival was 200/110mmHg. Initial management included IV magnesium sulfate and anti-hypertensives. An urgent CT head excluded haemorrhage but showed occipital lobe oedema. An emergency caesarean section was performed once her BP was stabilised. A postpartum MRI had findings indicative of PRES and an atypical finding of two tiny foci of restricted diffusion within the pons which could indicate tiny infarcts. She had no clinically evident focal neurological sequelae postpartum, however, her postpartum recovery was prolonged with 3 admissions for anti-hypertensive titration. The obstetic medicine team helped manage her care with post-discharge instructions and a target BP of less than 145/85.

Discussion

Acute management of PRES is supportive and includes reversing suspected causes. In eclampsia this includes correcting hypertension and prompt delivery. However, while ultra-rapid BP reduction isn't recommended due to risk of complications including cerebral hypoperfusion and subsequent ischemia, there are no specific Australian guidelines to stipulate how quickly to lower BP. European guidelines for hypertensive encephalopathy recommend reducing the MAP by 20-25% immediately. The American guidelines for hypertensive encephalopathy guidelines recommend reducing the systolic BP by 25% in the first hour, then <160/100 in the next 2-6 hours and then systolic BP <130-140 over the next 24-48 hours. This balance can be difficult to achieve in the severely hypertensive patient presenting with an eclamptic seizure where the goal is to stabilise the BP prior to delivery. Given PRES is common in patients with eclampsia, further research is needed to guide the optimal rate of BP reduction to optimise neurological outcomes.

References

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